19 by sputtering. In a nitrogen gas atmosphere, thermal treatment is performed for 30 seconds at 500 °C. As a result of reaction between the wiring 3 and the cobalt film, a cobalt silicide film 25 is formed. The cobalt film which did not react with the wiring 3 and the titan nitride film are removed in a wet process using a mixture including sulfuric acid and hydrogen peroxide.

IN THE CLAIMS:

Please **CANCEL** claim 3 without prejudice or disclaimer.

Please **AMEND** the claims as follows:

1. (Amended) A method for manufacturing a semiconductor device, comprising the steps of:

forming a wiring comprising silicon on a surface of a semiconductor substrate;

covering part of the wiring with a resist pattern;

implanting ions into the wiring using the resist pattern as a mask;

removing the resist pattern;

thinning the wiring by removing a surface layer of the wiring to a depth of at least 5 nm; and

forming a metal silicide film on a surface of the wiring by causing reaction between a surface layer of the thinned wiring and a refractory metal which reacts with silicon to form silicide,

wherein the wiring thinning step comprises the steps of:

oxidizing the wiring, using a rapid thermal processing apparatus, beginning on an upper surface thereof down to a predetermined depth; and

removing an oxidized section of the wiring oxidized in the oxidizing step.

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5. (Amended) A method for manufacturing a semiconductor device, comprising the steps of:

forming wiring comprising silicon on a surface of a semiconductor substrate;

covering part of the wiring with a resist pattern;

implanting ions into the wiring using the resist pattern as a mask;

removing the resist pattern;

oxidizing the wiring, using a rapid thermal processing apparatus, beginning on an upper surface thereof down to a predetermined depth;

removing an oxidized section of the wiring oxidized in the oxidizing step and thereby thinning the wiring; and

forming a metal silicide film on a surface of the wiring by causing reaction between a surface section of the thinned wiring and a refractory metal which reacts with silicon to form silicide.

Please **ADD** the following new claim 9:

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9. (New) A method of manufacturing a semiconductor device according to claim 1, wherein in the step of oxidizing the wiring, the oxidation is conducted in an atmosphere including an oxygen gas and a hydrogen gas.